

CLAIMS:

1. Display device for displaying an image comprising a plurality of display pixels (2), the display device comprising: sensors (9; 11; 14) for monitoring operating conditions of the display pixels (2), and a controller (3) coupled to receive data related to the operating conditions from the sensors (9; 11; 14) for determining a brightness change of the pixels (2) caused by the operating conditions, to generate a driving signal (8) for driving the pixels (2) in dependence on the brightness change.
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2. Display device according to claim 1, wherein said sensors (9; 11; 14) comprise at least one temperature sensor (9) for monitoring temperature data relating to the pixels (2),
10 monitoring means (5) are present for monitoring total charge data of the pixels (2), and said controller (3) is adapted to generate said driving signal (8) in dependence on the total charge data and the temperature data.
3. Display device according to claim 2, wherein the controller is adapted to
15 derive an acceleration factor from the temperature data and to adjust the driving signal (8) depending on the product of the total charge data and the acceleration factor.
4. Display device according to claim 2, wherein the temperature sensor (9) comprises at least one reference pixel and temperature determination means adapted to
20 determine a temperature in dependence on at least one temperature-dependent characteristic of the reference pixel.
5. Display device according to claim 1, wherein the sensors (9; 11; 14) comprise at least one reference pixel (11), monitoring means (5) are present for monitoring total charge
25 data of the pixels (2), and further monitoring means (13) are present, adapted for determining degradation state data of said reference pixel (11), said controller (3) being adapted to generate said driving signal (8) taking account of said total charge data and said degradation state data.

6. Display device according to claim 5, wherein a photodiode is present to measure the degradation state data of said reference pixel (11).

7. Display device according to claim 5, wherein the pixels (2) comprise at least 5 two sub-pixels of a different type, and at least one reference pixel for each type is present.

8. Display device according to claim 5, wherein said controller (3) is adapted to provide each reference pixel (11) with a driving signal corresponding to an average brightness level of the respective types.

10 9. Display device according to claim 5, wherein said controller (3) is adapted to ignore at least one of the total charge data and the data from the sensors (9; 11; 14) for at least one sub-pixel.

15 10. Display device according to claim 1, wherein the sensors (9; 11; 14) comprise means (14) to sense a relation between a reverse current and a reverse voltage of the pixels (2) for deriving degradation state data for the pixels (2), and said controller (3) is adapted to generate said driving signal (8) taking account of said degradation state data.

20 11. Display device according to claim 10, wherein said means (14) are adapted to derive said degradation state data when the display device (1) is turned on.

12. Method of generating a driving signal (8) for driving a plurality of pixels (2) of an organic electroluminescent display device for displaying an image, the device comprising sensors (9; 11; 14) for monitoring operating conditions of the pixels (2);
25 the method comprising the steps of:
- obtaining data from the sensors (9; 11; 14) related to the operating conditions;
- determining a brightness change of the pixels (2) caused by the operating conditions; and
- generating a driving signal (8) in dependence on the brightness change.
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